

**REPLACEMENT CLAIMS**

- 1) (CURRENTLY AMENDED) A method of producing a cloned non-human, non-primate mammalian NT embryo, the method comprising (a) introducing metaphase donor genetic material, in the form of a cell or nucleus, from a differentiated cell of a non-human, non-primate species into an metaphase oocyte of the same species, and (b) activating the oocyte, thereby yielding to yield a cloned non-human, non-primate mammalian NT embryo.
- 2) (ORIGINAL) The method of claim 1 wherein the donor genetic material introduced into the oocyte comprises a nucleus.
- 3) (ORIGINAL) The method of claim 1 wherein the donor genetic material introduced into the oocyte comprises an isolated nucleus.
- 4) (ORIGINAL) The method of claim 1 wherein the donor genetic material introduced into the oocyte is present in a donor cell.
- 5) (ORIGINAL) The method of claim 4 further comprising fusing the donor cell and the oocyte.
- 6) (PREVIOUSLY CANCELED)
- 7) (CURRENTLY AMENDED) The method of claim 1 wherein the differentiated cell is selected from the group consisting of a fibroblast, an epithelial cell, and a hematopoietic cell, and a lymphocyte.
- 8) (ORIGINAL) The method of claim 7 wherein the epithelial cell is a cumulus cell.
- 9) (CURRENTLY AMENDED) The method of claim 1 wherein the differentiated cell is obtained from a source selected from the group consisting of ~~a late embryonic stage embryo,~~ a fetus, an adult, and a cultured cell line.
- 10) (ORIGINAL) The method of claim 1 wherein the donor genetic material comprises transgenic DNA.
- 11) (CURRENTLY CANCELLED)
- 12) (CURRENTLY AMENDED) The method of claim ~~11~~ 1 wherein activating the oocyte occurs before the donor genetic material is introduced into the oocyte.

- 13) (CURRENTLY AMENDED) The method of claim ~~11~~ 1 wherein activating the oocyte ~~or the NT embryo~~ occurs at ~~about~~ the same time the donor genetic material is introduced into the oocyte.
- 14) (CURRENTLY AMENDED) The method of claim ~~11~~ 1 wherein activating the ~~NT embryo~~ oocyte occurs after the donor genetic material is introduced into the oocyte.
- 15) (CURRENTLY AMENDED) The method of claim ~~11~~ 1 wherein activating comprises introducing to the oocyte ~~or the NT embryo~~ cytoplasm from a fertilized oocyte.
- 16) (CURRENTLY AMENDED) The method of claim ~~11~~ 1 wherein activating comprises removing the donor genetic material from the ~~NT embryo~~ oocyte and introducing the donor genetic material to an enucleated fertilized oocyte.
- 17) (CURRENTLY AMENDED) The method of claim ~~11~~ 1 wherein activating comprises artificially activating the oocyte ~~or the NT embryo~~.
- 18) (CURRENTLY AMENDED) The method of claim ~~11~~ 1 wherein activating comprises contacting the oocyte ~~or NT embryo~~ with cycloheximide.
- 19) (ORIGINAL) The method of claim 1 further comprising enucleating the oocyte before introducing the donor genetic material.
- 20) (ORIGINAL) The method of claim 1 further comprising enucleating the ~~NT embryo~~ oocyte after introducing the donor genetic material to the oocyte, wherein enucleating the ~~NT embryo~~ oocyte comprises removal of maternal genetic material.
- 21) (ORIGINAL) The method of claim 1 wherein the oocyte is arrested at metaphase I as a result of exposure to an arresting agent.
- 22) (ORIGINAL) The method of claim 21 wherein the oocyte is enucleated while in metaphase I.
- 23) (ORIGINAL) The method of claim 1 wherein the non-human mammal is a pig.
- 24) (ORIGINAL) The method of claim 1 wherein the non-human mammal is a cow.
- 25) (ORIGINAL) The method of claim 1 further comprising incubating the NT embryo such that the NT embryo undergoes cell division.
- 26) (CURRENTLY AMENDED) A method of producing a cloned non-human, non-primate mammal, the method comprising introducing donor genetic material, in the form of a cell or nucleus, from a differentiated cell of a non-human, non-primate species into an oocyte

of the same species, and activating the oocyte, thereby yielding to yield a cloned non-human, non-primate mammalian NT embryo and incubating the NT embryo such that the NT embryo undergoes cell division wherein:

- a) the donor genetic material is at metaphase; and
  - b) incubating the NT embryo occurs after transfer of the NT embryo to a host mammal.
- 27) (PREVIOUSLY AMENDED) A method of producing a cloned non-human, non-primate mammal, the method comprising introducing donor genetic material, in the form of a cell or nucleus, from a differentiated cell or a non-human, non-primate species into an oocyte of the same species, and activating the oocyte, thereby yielding to yield a cloned non-human, non-primate mammalian NT embryo and incubating the NT embryo such that the NT embryo undergoes cell division wherein:
- a) the donor genetic material is at metaphase; and
  - b) incubating the NT embryo comprises culturing the NT embryo in vitro until at least the 2-cell stage.
- 28) (ORIGINAL) The method of claim 27 further comprising transferring the NT embryo to a host mammal of the same species after the in vitro incubation.
- 29) (ORIGINAL) The method of claim 28 wherein the NT embryo undergoes cell division in the host mammal and develops into a fetus.
- 30) (ORIGINAL) The method of claim 28 wherein the NT embryo undergoes cell division in the host mammal and develops into an offspring.